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EXAMINER

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ART UNIT PAPER NUMBER

1615

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



### DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11-3-05 has been entered.

Claims 1-24, 29-67, 73-85, 161 and 162 are pending of which claims 41-67 and 73-85 have been withdrawn. Claims 1-24, 29-40, 161 and 162 have been examined.

The following rejections of record have been maintained:

1. Claims 1-4, 10-40, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No US 2002/0031483 A1 to Beck et al (hereafter collectively Beck).

**Beck** teaches a hair treatment composition comprising a compound chosen from a TCA cycle intermediate, a carbohydrate, a sugar, a fatty acid product or a glycolysis product. Appropriate sugars include trioses such as glyceraldehydes (aldose), and dihydroxyacetone (ketose), tetroses such as erythrose, threose, and erythrulose, pentoses such as ribose, arabinose, xylose, lyxose, ribulose and ribulose phosphate and xylulose, which read on instant claims 121-135. Further, Beck teaches Furanoses, pyranoses, phosphate derivatives of sugars (page 1, paragraph 0015). In col. 2,

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paragraph 0041, Beck teaches the film-forming cationic polymers such as Polyquaternium 16, which is also claimed. Beck also teaches that the composition preferably contains 0.01% to 0.5% of the useful compounds (page 1, paragraph 0018), which falls within the claimed range of 0.01% to 10%. Beck teaches the compositions in the form of a shampoo or used in a conditioner composition, which read on the instant dispersion or emulsion (page 1, paragraph 0020). Further, Beck suggests addition of suitable surfactants, polymers, conditioning agents, adjunct materials and water to the compositions (pages 2 and 3, and examples 4-9 on page 5).

Beck teaches that the composition is used for hair treatment, in particular for oxygen consumption of hair follicle and thus stimulating the hair growth. Beck does not teach instant durable non-permanent shaping of hair. However, as explained the recitation of intended use does not carry patentable weight in composition claims. Further, amount of compounds taught by Beck is within the claimed range of monosaccharides. Accordingly, it would have been obvious of one of an ordinary skill in the art at the time of the instant invention to use the monosaccharides i.e., trioses, tetroses etc., containing various cosmetic additives such as cationic polymers (Polyquaternium series of compounds) in the hair treatment composition in the range of 0.01 to 0.5% with an expectation to stimulate the growth of hair follicle because Beck suggests that the sugars provide the required oxygen supply for the growth of hair follicle.

While Beck does not recognize the claimed effect, Beck teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the

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hair compositions containing 0.01% to 0.5% of sugars such as trioses or tetroses possess the ability to impart the claimed durable non-permanent shaping of hair fibers. With respect to the limitation heat-activated, instant claims does not state the temperature or the process of heating. However, the composition of Beck, upon application to skin, undergoes a temperature shift due to the normal body temperature and thus meets the claimed requirement.

2. Claims 1, 2, 5, 6, 10-16, 24-40, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,900,545 to **Wisotzki**.

**Wisotzki** teaches hair compositions containing panthenol, at least mono or disaccharides of pentoses or hexoses, one triol and at least one polyvinylpyrrolidone (lines bridging col. 1-2). Among the pentoses and hexoses, **Wisotzki** teaches aldoses and ketoses or their mixtures containing C5 to C6 atoms, the suitable monosaccharides including xylose, glucose, ribose, arabinose, sorbose etc (col. 2, lines 36-49 and claims for the amounts of sugars). **Wisotzki** also states that technically all naturally occurring mixtures of mono or disaccharides are suitable for the hair regenerating hair-split ends and revitalizing hair. The polyvinylpyrrolidone film-forming polymer of **Wisotzki** meets instant claimed nonionic polymer. Accordingly, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to use the composition of **Wisotzki** containing sugars, in particular aldoses and ketoses, and film-forming polymer PVP for treating hair to revitalize hair by regenerating split ends because **Wisotzki** suggests that the combination of sugars, panthenol and PVP have a considerably high

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healing rate in regenerating the split ends of hairs caused to permanent waving or dyeing of hairs. Further, while Wisotzki teaches pentoses and hexoses as opposed to the claimed C3 to C5 monosaccharides, Wisotzki teaches both hexoses and pentoses are equally effective in regenerating and revitalizing hair and teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the hair compositions containing sugars of Wisotzki possess the ability to impart the claimed durable non-permanent shaping of hair fibers. With respect to the limitation heat-activated, instant claims does not state the temperature or the process of heating. However, the composition of Wisotzki, upon application to skin, undergoes a temperature shift due to the normal body temperature and thus meets the claimed requirement.

3. Claims 1, 2, 5-16, 24-40, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,690,924 to Keil et al (Keil) in view of over US 4,900,545 to **Wisotzki**.

Keil teaches hair treatment compositions comprising chitosan, 2-pyrrolidone carboxylic acid and anionic or nonionic film forming polymers or other natural film forming polymers for increased combability, care and fixing of hair. Among the film-forming polymers, Keil suggests the polymers of the instant claims (col. 2, lines 35-61) such as LUVISKOL. The examples of Keil are directed to hair compositions (hair fixing as well as a shampoo with hair fixing action-example 10) and contain various film-

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forming polymers (see col. 5-8). Keil teaches cosmetic additives of the instant claims but does not teach the instant monosaccharides.

**Wisotzki** teaches hair compositions containing panthenol, at least mono or disaccharides of pentoses or hexoses, one triol and at least one polyvinylpyrrolidone (lines bridging col. 1-2). Among the pentoses and hexoses, Wisotzki teaches aldoses and ketoses or their mixtures containing C5 to C6 atoms, the suitable monosaccharides including xylose, glucose, ribose, arabinose, sorbose etc (col. 2, lines 36-49 and claims for the amounts of sugars). Wisotzki also states that technically all naturally occurring mixtures of mono or disaccharides are suitable for the hair regenerating hair-split ends and revitalizing hair. The polyvinylpyrrolidone film-forming polymer of Wisotzki meets instant claimed nonionic polymer.

Accordingly, it would have been obvious of one of an ordinary skill in the art at the time of the instant invention to use the monosaccharides of Wisotzki in the hair treatment composition of Keil containing the film-forming polymers for fixing the hair, with an expectation to regenerate and revitalize hair because Wisotzki suggests that the combination of sugars, panthenol and PVP have a considerably high healing rate in regenerating the split ends of hairs caused to permanent waving or dyeing of hairs. Further, while Wisotzki teaches pentoses and hexoses as opposed to the claimed C3 to C5 monosaccharides, Wisotzki teaches both hexoses and pentoses are equally effective in regenerating and revitalizing hair and teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the hair compositions containing sugars of Wisotzki possess the ability to impart the claimed durable non-

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permanent shaping of hair fibers. With respect to the limitation heat-activated, instant claims does not state the temperature or the process of heating. However, the composition of Wisotzki, upon application to skin, undergoes a temperature shift due to the normal body temperature and thus meets the claimed requirement.

### ***Response to Arguments***

Applicant's arguments filed 11-3-05 have been fully considered but they are not persuasive.

#### **BECK- 103:**

Applicants argue that there is no suggestion or motivation in Beck to select one compound chosen from C3-C5 saccharides from list of possible sugars such as trioses, tetroses, pentoses, glucose, disaccharide, complex sugars such as glyceraldehydes etc. Applicants argue that Beck's lack of specificity does not render the present claimed invention obvious. However, applicants have not provided any unexpected results with C3-C5 sugars as opposed to C6 sugars. In response to the examiner's position, applicants state that until the examiner has meet the burden of establishing a prima facie of obviousness, there is no need for the applicants to provide any proof of unobviousness. The motivation or suggestion to choose a specific sugar comes from the teaching of Beck that the sugars are useful as a hair composition. While Beck does not teach for the claimed effect, instant claims are only directed to a composition and



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not a method and accordingly the motivation to choose a sugar in the hair composition need not be the same as motivation of the instant invention. Further, Beck teaches that all the sugars are equally effective in the hair composition. Therefore, one of an ordinary skill in the art would have achieved the same result as that of the instant, absent evidence to the contrary.

It is argued that examiner is improper in considering the claim limitations "effective amounts of film-forming and sugars", as in claims 161 and 162. However, Beck teaches the amounts of sugars that fall within the claimed range and further the argument regarding the preferred sugars of Beck is not persuasive because the teachings of prior art are not limited to preferred embodiments. The argument that the reference fails to teach a composition that teaches a film-forming and claimed monosaccharide is not persuasive because the rejection is under 35 USC 103(a) and not an anticipation rejection. Beck also clearly teaches the composition not just for hair follicle respiration, but for hair conditioning effect that includes the claimed shaping or other perming effects.

Wisotzki:

Applicants continued to disagree with the rejection and argue that intended limitations should be given weight. However, the composition of Wisotzki teaches hair composition and the burden to show that the composition does not achieve the claimed effect is on applicants. Further, it is argued that similar to Beck, there is no suggestion in Wisotzki to select the claimed monosaccharides over any other sugar disclosed such as

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disaccharides and that to arrive at the claimed invention from Wisotzki, one of ordinary skill in the art must pick from a myriad of possibilities without specific guidance to arrive at the claimed invention. Applicants' argument is not found persuasive because Wisotzki teaches hair compositions with a hexose or pentose sugar and not a laundry list of sugars as argued by applicants. Further, the reference teaches amounts of the sugars that fall within the claimed amounts. Accordingly, one of an ordinary skill in the art does not have to pick and choose from the sugars of Wisotzki in order to arrive at the instant invention.

Keil and Wisotzki:

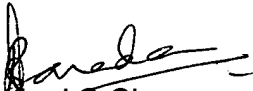
Applicants argue that the references cannot be combined as suggested by office because Keil teaches chitosan for hair and uses saccharides as film-forming agents. The argument is not persuasive both references teach film-formers for hair and accordingly, the motivation to combine the film-forming agents to at least obtain an additive effect would have been obvious for a skilled artisan. It is to be noted that the rejection does not state replacing chitosan of Keil with sugars of Wisotzki. The motivation of adding sugars to Keil comes from Wisotzki, which teaches both sugars and polymers for hair applications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S. Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 9.00 AM -6.30 PM

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lakshmi S Channavajjala  
Examiner  
Art Unit 1615  
January 23, 2006